



## Exposure to bushfire smoke during prescribed burns and wildfires: Firefighters' exposure risks and options

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### Abstract:

Firefighters are exposed to known health-damaging air pollutants present in bushfire smoke and poorly managed exposure can result in serious health issues. A better understanding of exposure levels and the major factors influencing exposures is crucial for the development of mitigation strategies to minimise exposure risks and adverse health impacts. This study monitored air toxics within the breathing zone of firefighters at prescribed burns and at wildfires in Australia. The results showed that exposure levels were highly variable, with higher exposures (sometimes exceeding occupational exposure standards) associated with particular work tasks (such as patrol and suppression) and with certain burn conditions. The majority of firefighter's exposures were at low and moderate levels (~60%), however considerable attention should be given to the high (~30%) and very high (6%) exposure risk situations for which acute and chronic health risks are very likely and for which control strategies should be developed and implemented to minimise health risks.

**Source:** <http://dx.doi.org/10.1016/j.envint.2010.09.005>

### Resource Description

#### Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Extreme Weather Event

**Air Pollution:** Particulate Matter, Other Air Pollution

**Air Pollution (other):** CO, formaldehyde

**Extreme Weather Event:** Wildfires

#### Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

#### Geographic Location:

resource focuses on specific location

Non-United States

# Climate Change and Human Health Literature Portal

**Non-United States:** Australasia

**Health Impact:** 

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

**Population of Concern:** A focus of content

**Population of Concern:** 

populations at particular risk or vulnerability to climate change impacts

Workers

**Resource Type:** 

format or standard characteristic of resource

Research Article

**Timescale:** 

time period studied

Time Scale Unspecified